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Ser Thr Lys Gln Cys Gln Gln Glu Ile Ala Asn Val Val Cys Leu His 180 185 190

Gln Ala Gly Ser Leu Met Pro Lys Ala Val Pro Arg His Cys Gln Leu 195 200 205

Thr Gly Lys Met Ser Pro Gly Ile Gln Trp Asp Glu Ser Gln Ala Gln 210 215 220

Gln Pro Met Asp Gly Pro Pro Val Arg Ile Ala Tyr Met Leu Val Val 225 230 235 240

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<213> Rattus norvegicus

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Ala Pro Arg Thr Gln Lys Gln Lys His Gln Pro Glu Leu Ala Lys Lys
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Pro Leu Ser Arg Gln Lys Glu Arg Leu Gln Arg Lys Leu Gly Ala Gln 50 55 60

Asp Lys Gly Gln Gly Gln Ser Val Leu Gly Lys Gly Pro Lys Glu Val 65 70 75 80

Leu Pro Pro Arg Glu Lys Ala Pro Gly Asn Ser Ser Gln Gly Lys Asp 85 90 95

Leu Ser Arg His Ser His Ser Arg Lys Ser Gly Gly Gly Ser Pro
100 105 110

Glu Thr Lys Ser Asp Gln Val Pro Lys Cys Asp Ile Ser Gly Lys Glu 115 120 125

Ala Ile Se 130	er Ala Leu	Thr Arg 135	Ala Ly	s Ser	Lys His 140	Cys /	Arg Glr	Glu
Ile Ala G 145	lu Thr Tyr	Cys Arg 150	His Ly		Gly Leu 155	Leu	Met Pro	Glu 160
Lys Val A	la Arg Phe 165		Leu Gl	u Gly 170	Lys Ala	Asn :	Lys Asr 175	
Gln Trp As	sp Glu Asp 180	Ala Val	Glu Ty 18		Pro Pro		Pro Val 190	Arg
Ile Ala Pi	ne Val Leu 95	Val Val	His Gl 200	y Arg	Ala Ser	Arg (	Gln Leı	Gln
Arg Met Ph 210	ne Lys Ala	Ile Tyr 215	His Ly	's Asp	His Phe 220	Tyr '	Tyr Ile	His
Val Asp Ly 225	ys Arg Ser	Asn Tyr 230	Leu Hi	_	Gln Val 235	Leu (	Gln Phe	e Ser 240
Arg Gln Ty	yr Asp Asn 245	_	Val Th	ır Ser 250	Trp Arg	Met 7	Ala Thi 255	
Trp Gly G	ly Ala Ser 260	Leu Leu	Ser Th	_	Leu Gln		Met Arg 270	Asp
Leu Leu G	lu Met Thr 75	Asp Trp	Pro Tr 280	p Asp	Phe Phe	Ile 2 285	Asn Leu	Ser
Ala Ala As 290	sp Tyr Pro	Ile Arg 295	Thr As	n Asp	Gln Leu 300	Val i	Ala Phe	: Leu
Ser Arg Ty 305	yr Arg Asp	Met Asn 310	Phe Le		Ser His 315	Gly A	Arg Asp	Asn 320
Ala Arg Ph	ne Ile Arg 325		Asp Le	u Asp 330	Arg Leu	Phe 1	Leu Glu 335	_
Asp Thr H:	is Met Trp 340	Arg Leu	Gly As		Arg Ile		Glu Gly 350	lle
Ala Val As	sp Gly Gly	Ser Asp	Trp Ph	ie Leu	Leu Asn	Arg 1	Lys Phe	Val

355 360 365

Glu Tyr Val Ala Phe Ser Thr Asp Asp Leu Val Thr Lys Met Lys Gln Phe Tyr Ser Tyr Thr Leu Leu Pro Ala Glu Ser Phe Phe His Thr Val Leu Glu Asn Ser Pro His Cys Asp Thr Met Val Asp Asn Asn Leu Arg Ile Thr Asn Trp Asn Arg Lys Leu Gly Cys Lys Cys Gln Tyr Lys His Ile Val Asp Trp Cys Gly Cys Ser Pro Asn Asp Phe Lys Pro Gln Asp Phe His Arg Phe Gln Gln Thr Ala Arg Pro Thr Phe Phe Ala Arg Lys Phe Glu Ala Ile Val Asn Gln Glu Ile Ile Gly Gln Leu Asp Ser Tyr Leu Tyr Gly Asn Tyr Pro Ala Gly Thr Pro Gly Leu Arg Ser Tyr Trp Glu Asn Val Tyr Asp Glu Pro Asp Gly Ile Gln Ser Leu Ser Asp Val Ala Leu Thr Met Tyr His Ser Phe Ile Arg Leu Gly Leu Arg Arg Ala Glu Ser Ser Leu His Thr Asp Gly Glu Asn Ser Cys Arg Tyr Tyr Pro Met Gly His Pro Ala Ser Val His Leu Tyr Phe Leu Ala Asp Arg Phe Gln Gly Phe Leu Ile Lys His His Val Thr Asn Leu Ala Val Ser Lys Leu Glu Thr Leu Glu Thr Trp Met Met Pro Lys Lys Val Phe Lys Val 

Ala Ser Pro Pro Ser Asp Phe Gly Arg Leu Gln Phe Ser Glu Val Gly
595 600 605

Thr Asp Trp Asp Ala Lys Glu Arg Leu Phe Arg Asn Phe Gly Gly Leu 610 620

Leu Gly Pro Met Asp Glu Pro Val Gly Met Gln Lys Trp Gly Lys Gly 625 635 635 640

Pro Asn Val Thr Val Thr Val Ile Trp Val Asp Pro Val Asn Val Ile 645 650 655

Ala Ala Thr Tyr Asp Ile Leu Ile Glu Ser Thr Ala Glu Phe Thr His
660 665 670

Tyr Lys Pro Pro Leu Asn Leu Pro Leu Arg Pro Gly Val Trp Thr Val 675 680 685

Lys Ile Leu His His Trp Val Pro Val Ala Glu Thr Lys Phe Leu Val 690 695 700

Ala Pro Leu Thr Phe Ser Asn Lys Gln Pro Ile Lys Pro Glu Glu Ala 705 710 715 720

Leu Lys Leu His Asn Gly Pro Pro Arg Ser Ala Tyr Met Glu Gln Ser 725 730 735

Phe Gln Ser Leu Asn Pro Val Leu Ser Leu His Ile Asn Pro Ala Gln
740 745 750

Val Glu Gln Ala Arg Lys Asn Ala Ala Phe Thr Gly Thr Ala Leu Glu
755 760 765

Ala Trp Leu Val Gly Gly Thr Trp Thr Ala Met Asp Val Cys Ala Thr 770 780

Gly Pro Thr Ala Cys Pro Val Met Gln Thr Cys Ser Gln Thr Ala Trp 785 790 795 800

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<212> DNA

<213> Rattus norvegicus

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<213> Rattus norvegicus

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Trp Ser Phe Ser Gly Leu Glu Glu Asp Glu Pro Gly Glu Lys Gly Arg
35 40 45

Gln Arg Lys Pro Arg Pro Leu Asp Pro Gly Glu Gly Ser Lys Asp Thr 50 55 60

Asp Ser Ser Ala Gly Arg Arg Gly Ser Ala Gly Arg Arg His Gly Arg 65 70 75 80

Trp Arg Gly Arg Ala Glu Ser Pro Gly Val Pro Val Ala Lys Val Val 85 90 95

Arg Ala Val Thr Ser Arg Gln Arg Ala Ser Arg Arg Val Pro Pro Ala 100 105 110

Pro Pro Pro Glu Ala Pro Gly Arg Gln Asn Leu Ser Gly Ala Ala 115 120 125

Gly Glu Ala Leu Ile Gly Ala Ala Gly Phe Pro Gln His Gly Asp Thr 130 135 140

Gly Ser Val Glu Gly Ala Pro Gln Pro Thr Asp Asn Ser Phe Thr Pro 145 150 155 160

Lys Cys Glu Ile Val Gly Lys Asp Ala Leu Ser Ala Leu Ala Arg Ala 165 170 175

Ser Thr Lys His Cys Gln Gln Glu Ile Ala Asn Val Val Cys Leu His 180 185 190

Gln Ala Gly Asn Leu Met Pro Lys Ser Val Pro Arg His Cys Gln Leu 195 200 205

Ala Gly Lys Val Ser Pro Gly Ile Gln Trp Glu Glu Val Arg Ala Gln 210 215 220

Gln Pro Val Ser Gly Pro Leu Val Arg Ile Ala Tyr Met Leu Val Val 225 230 235 240

His Gly Arg	g Ala Val 7 245	Arg Gln	Leu Lys	Arg Leu 250	Leu Lys		al Tyr 55
His Glu Glu	His Phe 1 260	Phe Tyr	Ile His 265	Val Asp	Lys Arg	Ser A 270	sn Tyr
Leu Tyr Arg 275		Val Glu	Leu Ala 280	Gln His	Tyr Asp 285		al Arg
Val Thr Pro 290	Trp Arg I	Met Val 295	Thr Ile	Trp Gly	Gly Ala 300	Ser L	eu Leu
Arg Met Tyı 305	_	Ser Met 310	Lys Asp	Leu Leu 315	Glu Thr	Pro G	ly Trp 320
Thr Trp Asp	Phe Phe 325	Ile Asn	Leu Ser	Ala Thr 330	Asp Tyr		hr Arg 35
Thr Asn Glu	Glu Leu ' 340	Val Ala	Phe Leu 345	Ser Lys	Asn Arg	Asp L 350	ys Asn
Phe Leu Lys 355	5		360		365	-	-
Gly Leu Asr		375	_	-	380	-	
Gly Glu Arg	:	390	-	395		-	400
Trp Phe Val	405	_		410		4	15
Asp Pro Lei	420		425		-	430	
Pro Ala Glu 435	;		440		445		
Glu Ser Leu 450	ı Val Asp i	Asn Asn 455	Leu Arg	Val Thr	Asn Trp 460	Asn A	rg Lys

Leu Gly Cys Lys Cys Gln Tyr Lys His Ile Val Asp Trp Cys Gly Cys

Ser Pro Asn Asp Phe Lys Pro Gln Asp Phe Leu Arg Leu Gln Gln Val 485 490 495

Ser Arg Pro Thr Phe Phe Ala Arg Lys Phe Glu Ser Thr Val Asn Gln 500 505 510

Glu Val Leu Glu Ile Leu Asp Phe His Leu Tyr Gly Ser Tyr Pro Pro 515 520 525

Gly Thr Pro Ala Leu Lys Ala Tyr Trp Glu Asn Ile Tyr Asp Met Ala 530 540

Asp Gly Pro Ser Gly Leu Ser Asp Val Leu Leu Thr Ala Tyr Thr Ala 545 550 555 560

Phe Ala Arg Ile Ser Leu Arg His Ala Ala Thr Val Ser Pro Leu Ala 565 570 575

Thr Ala Val Cys Arg Phe Glu Pro Arg Gly Leu Pro Ser Ser Val His
580 585 590

Leu Tyr Phe Tyr Asp Asp His Phe Gln Gly Tyr Leu Val Thr Gln Ala 595 600 605

Val Gln Pro Ser Ala Gln Gly Pro Ala Glu Thr Leu Glu Met Trp Leu 610 615 620

Met Pro Gln Arg Leu Leu Lys Pro Leu Gly His Ser Asp Gln Ala Ser 625 630 635 640

Arg Leu Gln Ser Leu Glu Val Gly Thr Glu Trp Asp Pro Lys Glu Arg 645 650 655

Leu Phe Arg Asn Phe Gly Gly Leu Leu Gly Pro Leu Asp Glu Pro Val 660 665 670

Ala Met Gln Arg Trp Ala Arg Gly Pro Asn Leu Thr Ala Thr Val Val 675 680 685

Trp Ile Asp Pro Thr Tyr Val Val Ala Thr Ser Tyr Asp Ile Thr Val 690 695 700

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1	His	Asn 770	Glu	Tyr	Met	Glu	Gln 775	Ser	Phe	Gln	Gly	Leu 780	Ser	Gly	Ile	Leu		
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]	Pro	Ser	Leu 835	Glu	Leu	Cys	Arg	Leu 840	Thr	Ser	Trp	Ser	Ser 845	Leu	Ser	Pro		
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Asp Lys Arg Gln Gly Gln Ser Val Leu Gly Lys Gly Pro Lys Glu Val 35 40 45

Leu Pro Pro Arg Glu Lys Ala Thr Gly Asn Ser Ser Gln Gly Lys Asp 50 55 60

Leu Ser Arg His Ser His Ala Arg Lys Ser Gly Gly Gly Ser Pro 65 70 75 80

Glu Thr Lys Ser Asp Gln Ala Pro Lys Cys Asp Ile Ser Gly Lys Glu 85 90 95

Ala Ile Ser Ala Leu Thr Arg Ala Lys Ser Lys His Cys Arg Gln Glu 100 105 110

Ile Ala Glu Thr Tyr Cys Arg His Lys Leu Gly Leu Leu Met Pro Glu 115 120 125

Lys Val Ala Arg Phe Cys Pro Leu Lys Gly Lys Ala His Lys Asn Val 130 135 140

Gln Trp Asp Glu Asp Ala Val Glu Tyr Met Pro Ala Asn Pro Val Arg

Ile Ala Phe Val Leu Val Val His Gly Arg Ala Phe Arg Gln Phe Gln 165 170 175

Arg Met Ser Lys Ala Ile Tyr His Lys Asp His Phe Tyr Tyr Ile His 180 185 190

Val Asp Lys Arg Ser Asn Tyr Leu His Arg Gln Gly Leu Gln Phe Ser 195 200 205

Arg Gln Tyr Glu Asn Val Arg Val Thr Ser Trp Lys Met Ala Thr Ile 210 215 220

Trp Gly Gly Ala Ser Phe Leu Ser Thr Tyr Leu Gln Ser Met Arg Asp 225 230 235 240

Leu Leu Glu Met Thr Asp Trp Pro Trp Asp Phe Phe Ile Asn Leu Ser 245 250 255

Ala Ala Asp Tyr Pro Ile Arg Thr Asn Asp Gln Leu Val Ala Phe Leu 260 265 270

Ser Arg Tyr Arg Asp Met Asn Phe Leu Lys Ser His Gly Arg Asp Asn 275 280 285

Ala Arg Phe Ile Arg Lys Gln Gly Leu Asp Arg Leu Phe Leu Glu Cys 290 295 300

Asp Thr His Met Trp Arg Leu Gly Asp Arg Arg Ile Pro Glu Gly Ile 305 310 315 320

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Glu Tyr Val Ala Phe Ser Thr Asp Asp Leu Val Thr Lys Met Lys Gln 340 345 350

Phe Tyr Ser Tyr Thr Leu Leu Pro Ala Glu Ser Phe Phe His Thr Val 355 360 365

Leu Glu Asn Ser Pro His Cys Asp Thr Met Val Asp Asn Asn Leu Arg 370 375 380

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Phe	His	Arg	Phe 420	Gln	Gln	Thr	Ala	Arg 425	Pro	Thr	Phe	Phe	Ala 430	Arg	Lys
Phe	Glu	Ala 435	Ile	Val	Asn	Gln	Glu 440	Ile	Ile	Gly	Gln	Leu 445	Asp	Ser	Tyr
Leu	Ser 450	Gly	Asn	Phe	Pro	Ala 455	Gly	Thr	Pro	Gly	Leu 460	Arg	Ser	Tyr	Trp
Glu 465	Lys	Leu	Tyr	Asp	Gln 470	Ser	Ala	Pro	Leu	Arg 475	Ser	Leu	Ser	Asp	Val 480
Ala	Leu	Thr	Met	Tyr 485	His	Ser	Phe	Ile	Arg 490	Leu	Ġly	Leu	Arg	Arg 495	Ala
Glu	Ser	Ser	Leu 500	His	Thr	Asp	Gly	Glu 505	Asn	Ser	Cys	Arg	Tyr 510	Tyr	Pro
Met	Gly	His 515	Pro	Val	Ser	Val	His 520	Phe	Tyr	Phe	Leu	Ala 525	Asp	Arg	Phe
Gln	Gly 530				Lys			Val		Asn			Val	Ser	Lys
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Leu	Gly	Pro 595	Met	Asp	Glu	Pro	Val 600	Gly	Met	Gln	Lys	Trp 605	Gly	Lys	Gly

Pro	Asn 610	Val	Thr	Val	Thr	Val 615	Ile	Trp	Val	Asp	Pro 620	Val	Asn	Val	Ile
Thr 625	Ala	Thr	Tyr	Asp	Ile 630	Leu	Ile	Glu	Ser	Thr 635	Ala	Glu	Phe	Thr	His 640
Tyr	Lys	Pro	Pro	Leu 645	Asn	Leu	Pro	Leu	Arg 650	Pro	Gly	Val	Trp	Thr 655	Val
Lys	Ile	Leu	His 660	His	Trp	Val	Pro	Val 665	Ala	Glu	Thr	Lys	Phe 670	Leu	Val
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Phe 705	Gln	Ser	Leu	Asn	Pro 710	Val	Leu	Ser	Leu	His 715	Ile	Asn	Pro	Ala	Gln 720
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Arg	Ser 210	Phe	Val	Glu	Tyr	Val 215	Val	Tyr	Thr	Asp	Asp 220	Pro	Leu	Val	Ala
Gln 225	Leu	Arg	Gln	Phe	Tyr 230	Thr	Tyr	Thr	Leu	Leu 235	Pro	Ala	Glu	Ser	Phe 240
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Gln Tyr Lys His Ile Val Asp Trp Cys Gly Cys Ser Pro Asn Asp Phe 275 280 285

Lys Pro Gln Asp Phe Leu Arg Leu Gln Gln Val Ser Arg Pro Thr Phe 290 295 300

Phe Ala Arg Lys Phe Glu Ser Thr Val Asn Gln Glu Val Leu Glu Ile 305 310 315 320

Leu Asp Phe His Leu Tyr Gly Ser Tyr Pro Pro Ser Thr Pro Ala Leu 325 330 335

Lys Ala Tyr Trp Glu Asn Ile Tyr Asp Val Ala Asp Gly Pro Gly Gly 340 345 350

Leu Ser Asp Val Leu Leu Thr Ala Tyr Thr Ala Phe Ala Arg Leu Ser 355 360 365

Leu Arg His Ala Ala Thr Ala Val Ser Pro Leu Ala Thr Ala Val Cys 370 375 380

Arg Phe Glu Pro Arg Gly Leu Pro Ser Ser Val His Leu Tyr Phe Tyr 385 390 395 400

Asp Asp His Phe Gln Gly Tyr Leu Val Thr Gln Ala Val Gln Pro Ser 405 410 415

Ala Gln Gly Pro Ala Glu Thr Leu Glu Met Trp Leu Met Pro Gln Arg 420 425 430

Ser Leu Lys Leu Leu Gly His Ser Asp Gln Ala Ser Arg Leu Gln Ser 435 440 445

Leu Glu Val Gly Thr Glu Trp Asp Pro Lys Glu Arg Leu Phe Arg Asn 450 455 460

Phe Gly Gly Leu Leu Gly Pro Leu Asp Glu Pro Val Ala Met Gln Arg
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Trp Ala Arg Gly Pro Asn Leu Thr Ala Thr Val Val Trp Ile Asp Pro
485 490 495

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Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val Leu Gln Glu Trp 50 55 60

Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu Lys Arg Gln Ile Ala 65 70 75 80

Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser Glu Gln Leu Arg Asn Gly 85 90 95

Gln Tyr Gln Ala Ser Asp Ala Ala Gly Leu Gly Leu Asp Arg Ser Pro 100 105 110

Pro Glu Lys Thr Gln Ala Asp Leu Leu Ala Phe Leu His Ser Gln Val

Asp Lys Ala Glu Val Asn Ala Gly Val Lys Leu Ala Thr Glu Tyr Ala 130 135 140

Thr Gly Leu Thr Arg His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys
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Arg Asp Glu Leu Val Glu Ala Ile Glu Ser Ala Leu Glu Thr Leu Asn 180 185 190

Asn Pro Ala Glu Asn Ser Pro Asn His Arg Pro Tyr Thr Ala Ser Asp 195 200 205

Phe Ile Glu Gly Ile Tyr Arg Thr Glu Arg Asp Lys Gly Thr Leu Tyr

Glu Leu Thr Phe Lys Gly Asp His Lys His Glu Phe Lys Arg Leu Ile Leu Phe Arg Pro Phe Ser Pro Ile Met Lys Val Lys Asn Glu Lys Leu Asn Met Ala Asn Thr Leu Ile Asn Val Ile Val Pro Leu Ala Lys Arg Val Asp Lys Phe Arg Gln Phe Met Gln Asn Phe Arg Glu Met Cys Ile Glu Gln Asp Gly Arg Val His Leu Thr Val Val Tyr Phe Gly Lys Glu Glu Ile Asn Glu Val Lys Gly Ile Leu Glu Asn Thr Ser Lys Ala Ala Asn Phe Arg Asn Phe Thr Phe Ile Gln Leu Asn Gly Glu Phe Ser Arg Gly Lys Gly Leu Asp Val Gly Ala Arg Phe Trp Lys Gly Ser Asn Val Leu Leu Phe Phe Cys Asp Val Asp Ile Tyr Phe Thr Ser Glu Phe Leu Asn Thr Cys Arg Leu Asn Thr Gln Pro Gly Lys Lys Val Phe Tyr Pro Val Leu Phe Ser Gln Tyr Asn Pro Gly Ile Ile Tyr Gly His His Asp Ala Val Pro Pro Leu Glu Gln Gln Leu Val Ile Lys Lys Glu Thr Gly Phe Trp Arg Asp Phe Gly Phe Gly Met Thr Cys Gln Tyr Arg Ser Asp 

Phe Ile Asn Ile Gly Gly Phe Asp Leu Asp Ile Lys Gly Trp Gly Gly
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440
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Glu Asp Val His Leu Tyr Arg Lys Tyr Leu His Ser Asn Leu Ile Val 450 455 460

Val Arg Thr Pro Val Arg Gly Leu Phe His Leu Trp His Glu Lys Arg 465 470 475 480

Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln Ser 485 490 495

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Cys Leu Pro Pro Leu Arg Ala Ala Ala Glu Gln Leu Arg Gln Lys Asp 35 40 45

Leu Arg Ile Ser Gln Leu Gln Ala Glu Leu Arg Arg Pro Pro Pro Ala 50 55 60

Pro Ala Gln Pro Pro Glu Pro Glu Ala Leu Pro Thr Ile Tyr Val Val 65 70 75 80

Thr Pro Thr Tyr Ala Arg Leu Val Gln Lys Ala Glu Leu Val Arg Leu 85 90 95

Ser Gln Thr Leu Ser Leu Val Pro Arg Leu His Trp Leu Leu Val Glu 100 105 110

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<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

<sup>&</sup>lt;400> 18

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- Pro Arg Pro Ser Ala Ala Arg Asp Ala Pro Arg Ile Lys Trp Thr Lys 65 70 75 80
- Val Arg Thr Ala Ser Gly Gln Arg Gln Asp Leu Pro Ile Leu Val Ala 85 90 95
- Lys Asp Asn Val Val Arg Val Ala Lys Ser Trp Gln Gly Arg Val Ser 100 105 110
- Leu Pro Ser Tyr Pro Arg Arg Ala Asn Ala Thr Leu Leu Gly
  115 120 125
- Pro Leu Arg Ala Ser Asp Ser Gly Leu Tyr Arg Cys Gln Val Val Arg 130 135 140
- Gly Ile Glu Asp Glu Gln Asp Leu Val Pro Leu Glu Val Thr Gly Val 145 150 155 160
- Val Phe His Tyr Arg Ser Ala Arg Asp Arg Tyr Ala Leu Thr Phe Ala 165 170 175
- Glu Ala Glu Glu Ala Cys Arg Leu Ser Ser Ala Ile Ile Ala Ala Pro 180 185 190
- Arg His Leu Gln Ala Ala Phe Glu Asp Gly Phe Asp Asn Cys Asp Ala 195 200 205
- Gly Trp Leu Ser Asp Arg Thr Val Arg Tyr Pro Ile Thr Gln Ser Arg 210 215 220
- Pro Gly Cys Tyr Gly Asp Arg Ser Ser Leu Pro Gly Val Arg Ser Tyr 225 230 235 240

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Ser	Val 290	Gly	Gln	Leu	His	Leu 295	Ala	Trp	His	Glu	Gly 300	Leu	Asp	Gln	Cys
Asp 305	Pro	Gly	Trp	Leu	Ala 310	Asp	Gly	Ser	Val	Arg 315	Tyr	Pro	Ile	Gln	Thr 320
Pro	Arg	Arg	Arg	Cys 325	Gly	Gly	Pro	Ala	Pro 330	Gly	Val	Arg	Thr	Val 335	Tyr
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Ala	Tyr	Cys 355	Phe	Arg	Ala	His	His 360	Pro	Thr	Ser	Gln	His 365	Gly	Asp	Leu
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385					190					395					400
				405	Glu				410					415	
			420		Lys			425					430		
		435			Leu		440					445			
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Ser Ser His Thr Glu Val Ala Pro Thr Asp Pro Met Pro Arg Arg

Gly Arg Phe Lys Gly Leu Asn Gly Arg Tyr Phe Gln Gln Gln Glu Pro 485 490 495

Glu Pro Gly Leu Gln Gly Gly Met Glu Ala Ser Ala Gln Pro Pro Thr
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Ser Glu Ala Ala Val Asn Gln Met Glu Pro Pro Leu Ala Met Ala Val 515 520 525

Thr Glu Met Leu Gly Ser Gly Gln Ser Arg Ser Pro Trp Ala Asp Leu 530 540

Thr Asn Glu Val Asp Met Pro Gly Ala Gly Ser Ala Gly Gly Lys Ser 545 550 555 560

Ser Pro Glu Pro Trp Leu Trp Pro Pro Thr Met Val Pro Pro Ser Ile 565 570 575

Ser Gly His Ser Arg Ala Pro Val Leu Glu Leu Glu Lys Ala Glu Gly 580 585 590

Pro Ser Ala Arg Pro Ala Thr Pro Asp Leu Phe Trp Ser Pro Leu Glu 595 600 605

Ala Thr Val Ser Ala Pro Ser Pro Ala Pro Trp Glu Ala Phe Pro Val 610 615 620

Ala Thr Ser Pro Asp Leu Pro Met Met Ala Met Leu Arg Gly Pro Lys 625 630 635 640

Glu Trp Met Leu Pro His Pro Thr Pro Ile Ser Thr Glu Ala Asn Arg 645 650 655

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Ala Glu Thr Lys Val Tyr Ser Leu Pro Leu Ser Leu Thr Pro Thr Gly
675 680 685

Gln Gly Glu Ala Met Pro Thr Thr Pro Glu Ser Pro Arg Ala Asp 690 695 700

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Pro	His	Pro	Glu 900	Pro	Glu	Asp	Gln	Val 905	Glu	Thr	Gln	Gly	Thr 910	Ser	Gly
Ala	Ser	Val 915	Pro	Pro	His	Gln	Ser 920	Ser	Pro	Leu	Gly	Lys 925	Pro	Ala	Val

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- Pro Val Thr Leu Gly Ile Glu Asp Phe Glu Leu Glu Val Leu Ala Gly 965 970 975
- Ser Pro Gly Val Glu Ser Phe Trp Glu Glu Val Ala Ser Gly Glu Glu 980 985 990
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- Ser Asp Pro Cys Glu Asn Asn Pro Cys Leu His Gly Gly Thr Cys 1010 1015 1020
- Asn Ala Asn Gly Thr Met Tyr Gly Cys Ser Cys Asp Gln Gly Phe 1025 1030 1035
- Ala Gly Glu Asn Cys Glu Ile Asp Ile Asp Asp Cys Leu Cys Ser 1040 1045 1050
- Pro Cys Glu Asn Gly Gly Thr Cys Ile Asp Glu Val Asn Gly Phe 1055 1060 1065
- Val Cys Leu Cys Leu Pro Ser Tyr Gly Gly Ser Phe Cys Glu Lys 1070 1075 1080
- Asp Thr Glu Gly Cys Asp Arg Gly Trp His Lys Phe Gln Gly His 1085 1090 1095
- Cys Tyr Arg Tyr Phe Ala His Arg Arg Ala Trp Glu Asp Ala Glu 1100 1105 1110
- Lys Asp Cys Arg Arg Arg Ser Gly His Leu Thr Ser Val His Ser 1115 1120 1125
- Pro Glu Glu His Ser Phe Ile Asn Ser Phe Gly His Glu Asn Thr 1130  $\phantom{\bigg|}$  1135  $\phantom{\bigg|}$  1140

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- Thr Asp Asn Thr Gly Leu Gln Phe Glu Asn Trp Arg Glu Asn Gln 1160 1165 1170
- Pro Asp Asn Phe Phe Ala Gly Glu Asp Cys Val Val Met Val 1175 1180
- Ala His Glu Ser Gly Arg Trp Asn Asp Val Pro Cys Asn Tyr Asn 1195
- Leu Pro Tyr Val Cys Lys Lys Gly Thr Val Leu Cys Gly Pro Pro
- Pro Ala Val Glu Asn Ala Ser Leu Ile Gly Ala Arg Lys Ala Lys 1220 1225
- Asn Asn Val His Ala Thr Val Arg Tyr Gln Cys Asn Glu Gly Phe 1240 1235 1245
- Ala Gln His His Val Val Thr Ile Arg Cys Arg Ser Asn Gly Lys 1255 1260 1250
- Trp Asp Arg Pro Gln Ile Val Cys Thr Lys Pro Arg Arg Ser His 1265 1270 1275
- Arg Met Arg Gly His His His His Gln His His Gln His 1280 1285
- His His Lys Ser Arg Lys Glu Arg Arg Lys His Lys Lys His 1295 1300
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Ile Asp Leu Gln Leu Gln Phe Ser Thr Ser Gln Pro Glu Ala Leu Leu 50 55 60

Leu Leu Ala Ala Gly Pro Ala Asp His Leu Leu Gln Leu Tyr Ser 65 70 75 80

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Pro Met Pro 530	Ser Cys	Leu Arg 535	_	y Gln Thr	Tyr Lei 540	ı Leu Pro	Ile
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Ser Leu Met	Val Ile 565		His Th	r Gln Lys 570	Pro Le	ı Gly Pro 575	
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Pro Gly Glu 610	ı Pro Ala	Thr Glu 615		r Cys Arg	Glu Let 620	ı Glu Ala	Gly
Ser Leu Val	. Tyr Val	His Cys	Gly Gl	y Pro Ala 635	-	Leu Thr	Phe 640
Arg Val Ser	Asp Gly 645		ı Ala Se	r Pro Pro 650	Ala Thi	c Leu Lys 655	
Val Ala Ile	e Arg Pro 660	Ala Ile	Gln Il 66	_	Ser Th	Gly Leu 670	ı Arg
Leu Ala Glr 675	_	Ala Met	Pro Il 680	e Leu Pro	Ala Ası 689		Val
Glu Thr Asr 690	n Ala Val	Gly Gln 695	_	l Ser Val	. Leu Phe 700	e Arg Val	Thr
Gly Ala Let 705	ı Gln Phe	Gly Glu 710	ı Leu Gl	n Lys His 715		c Gly Gly	7 Val 720
Glu Gly Ala	Glu Trp 725	-	Thr Gl	n Ala Phe 730	His Gl	n Arg Asp 735	
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Tyr Asp Thi	Val Glu	Asn Leu	ı Ala Le	u Glu Val	. Gln Val	l Gly Gln	Glu

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- Ser Arg Ile Phe His Val Ala Arg Gly Gly Arg Arg Leu Leu Thr 1025 1030 1035
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- Ala Gln Leu Val Leu Thr Arg Lys Asp Leu Leu Phe Gly Ser Ile 1055 1060 1065
- Val Ala Val Asp Glu Pro Thr Arg Pro Ile Tyr Arg Phe Thr Gln 1070 1075 1080
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- Val Ala Asn Gly Ser Ser Leu Val Val Pro Gln Gly Gln Gly 1130 1135 1140
- Thr Ile Asp Thr Ala Val Leu His Leu Asp Thr Asn Leu Asp Ile 1145 1150 1155
- Arg Ser Gly Asp Glu Val His Tyr His Val Thr Ala Gly Pro Arg 1160 1165 1170
- Trp Gly Gln Leu Val Arg Ala Gly Gln Pro Ala Thr Ala Phe Ser 1175 1180 1185
- Gln Gln Asp Leu Leu Asp Gly Ala Val Leu Tyr Ser His Asn Gly 1190 1195 1200

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- Gly Pro Leu Ala Pro Leu Lys Leu Val Arg His Lys Lys Ile Tyr 1235 1240 1245
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- Glu Pro Pro Gln His Gly Pro Leu Gln Lys Glu Asp Gly Pro Gln 1400 1405 1410

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- Leu Ile Arg Tyr Val His Asp Gly Ser Glu Thr Leu Thr Asp Ser 1430 1435 1440
- Phe Val Leu Met Ala Asn Ala Ser Glu Met Asp Arg Gln Ser His 1445 1450 1455
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- Thr Ala Pro Ile Pro Ala Glu Ala Leu Arg Ser Thr Asp Gly Asp 1490 1495 1500
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  - Arg Gly Thr Leu Asp Gly Gly Phe Pro Phe Arg Leu Ser Asp Gly 1550 1560
  - Glu His Thr Ser Pro Gly His Phe Phe Arg Val Thr Ala Gln Lys 1565 1570 1575
  - Gln Val Leu Leu Ser Leu Lys Gly Ser Gln Thr Leu Thr Val Cys 1580 1585 1590
  - Pro Gly Ser Val Gln Pro Leu Ser Ser Gln Thr Leu Arg Ala Ser 1595 1600 1605
  - Ser Ser Ala Gly Thr Asp Pro Gln Leu Leu Tyr Arg Val Val 1610 1615 1620
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1625 1630 1635

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Gly	Asn 1655		Leu	Tyr	Glu	His 1660	Glu	Met	Pro	Pro	Glu 1665	Pro	Phe	Trp
Glu	Ala 1670	His	Asp	Thr	Leu	Glu 1675		Gln	Leu	Ser	Ser 1680	Pro	Pro	Ala
Arg	Asp 1685		Ala	Ala	Thr	Leu 1690		Val	Ala	Val	Ser 1695		Glu	Ala
Ala	Cys 1700	Pro	Gln	Arg	Pro	Ser 1705	His	Leu	Trp	Lys	Asn 1710	Lys	Gly	Leu
Trp	Val 1715		Glu	Gly	Gln	Arg 1720	Ala	Arg	Ile	Thr	Val 1725	Ala	Ala	Leu
Asp	Ala 1730		Asn	Leu	Leu	Ala 1735	Ser	Val	Pro	Ser	Pro 1740	Gln	Arg	Ser
Glu	His 1745	_	Val	Leu	Phe	Gln 1750	Val	Thr	Gln	Phe	Pro 1755		Arg	Gly
Gln	Leu 1760	Leu	Val	Ser	Glu	Glu 1765	Pro	Leu	His	Ala	Gly 1770	Gln	Pro	His
Phe	Leu 1775	Gln	Ser	Gln	Leu	Ala 1780	Ala	Gly	Gln	Leu	Val 1785	Tyr	Ala	His
Gly	Gly 1790	Gly	Gly	Thr	Gln	Gln 1795	Asp	Gly	Phe	His	Phe 1800	Arg	Ala	His
Leu	Gln 1805	Gly	Pro	Ala	Gly	Ala 1810	Ser	Val	Ala	Gly	Pro 1815	Gln	Thr	Ser
Glu	Ala 1820	Phe	Ala	Ile	Thr	Val 1825	Arg	Asp	Val	Asn	Glu 1830	Arg	Pro	Pro
Gln	Pro 1835	Gln	Ala	Ser	Val	Pro 1840	Leu	Arg	Leu	Thr	Arg 1845	Gly	Ser	Arg

- Ala Pro Ile Ser Arg Ala Gln Leu Ser Val Val Asp Pro Asp Ser 1850 1855 1860
- Ala Pro Gly Glu Ile Glu Tyr Glu Val Gln Arg Ala Pro His Asn 1865 1870 1875
- Gly Phe Leu Ser Leu Val Gly Gly Gly Leu Gly Pro Val Thr Arg 1880 1885 1890
- Phe Thr Gln Ala Asp Val Asp Ser Gly Arg Leu Ala Phe Val Ala 1895 1900 1905
- Asn Gly Ser Ser Val Ala Gly Ile Phe Gln Leu Ser Met Ser Asp 1910 1915 1920
- Gly Ala Ser Pro Pro Leu Pro Met Ser Leu Ala Val Asp Ile Leu 1925 1930 1935
- Pro Ser Ala Ile Glu Val Gln Leu Arg Ala Pro Leu Glu Val Pro 1940 1945 1950
- Gln Ala Leu Gly Arg Ser Ser Leu Ser Gln Gln Leu Arg Val 1955 1960 1965
- Val Ser Asp Arg Glu Glu Pro Glu Ala Ala Tyr Arg Leu Ile Gln 1970 1975 1980
- Gly Pro Gln Tyr Gly His Leu Leu Val Gly Gly Arg Pro Thr Ser 1985 1990 1995
- Ala Phe Ser Gln Phe Gln Ile Asp Gln Gly Glu Val Val Phe Ala 2000 2005 2010
- Phe Thr Asn Phe Ser Ser Ser His Asp His Phe Arg Val Leu Ala 2015 2020 2025
- Leu Ala Arg Gly Val Asn Ala Ser Ala Val Val Asn Val Thr Val 2030 2035 2040
- Arg Ala Leu Leu His Val Trp Ala Gly Gly Pro Trp Pro Gln Gly 2045 2050 2055

- Ala Thr Leu Arg Leu Asp Pro Thr Val Leu Asp Ala Gly Glu Leu 2060 2065 2070
- Ala Asn Arg Thr Gly Ser Val Pro Arg Phe Arg Leu Leu Glu Gly 2075 2080 2085
- Pro Arg His Gly Arg Val Val Arg Val Pro Arg Ala Arg Thr Glu 2090 2095 2100
- Pro Gly Gly Ser Gln Leu Val Glu Gln Phe Thr Gln Gln Asp Leu 2105 2110 2115
- Glu Asp Gly Arg Leu Gly Leu Glu Val Gly Arg Pro Glu Gly Arg 2120 2125 2130
- Ala Pro Gly Pro Ala Gly Asp Ser Leu Thr Leu Glu Leu Trp Ala 2135 2140 2145
- Gln Gly Val Pro Pro Ala Val Ala Ser Leu Asp Phe Ala Thr Glu 2150 2155 2160
- Pro Tyr Asn Ala Ala Arg Pro Tyr Ser Val Ala Leu Leu Ser Val 2165 2170 2175
- Pro Glu Ala Ala Arg Thr Glu Ala Gly Lys Pro Glu Ser Ser Thr 2180 2185 2190
- Pro Thr Gly Glu Pro Gly Pro Met Ala Ser Ser Pro Glu Pro Ala 2195 2200 2205
- Val Ala Lys Gly Gly Phe Leu Ser Phe Leu Glu Ala Asn Met Phe 2210 2215 2220
- Ser Val Ile Ile Pro Met Cys Leu Val Leu Leu Leu Leu Ala Leu 2225 2230 2235
- Ile Leu Pro Leu Leu Phe Tyr Leu Arg Lys Arg Asn Lys Thr Gly 2240 2245 2250
- Lys His Asp Val Gln Val Leu Thr Ala Lys Pro Arg Asn Gly Leu 2255 2260 2265

Ala Gly Asp Thr Glu Thr Phe Arg Lys Val Glu Pro Gly Gln Ala 2270 2275 2280

Ile Pro Leu Thr Ala Val Pro Gly Gln Gly Pro Pro Pro Gly Gly 2285 2290 2295

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<213> Rattus norvegicus

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Leu Leu Val Ser Gly Asp Gln Asp Thr Gln Asp Thr Thr Thr Thr 20 25 30

Glu Lys Gly Leu His Met Leu Lys Ser Gly Ser Gly Pro Ile Gln Ala  $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$ 

Ala Leu Ala Glu Leu Val Ala Leu Pro Cys Phe Phe Thr Leu Gln Pro 50 55 60

Arg Gln Ser Pro Leu Gly Asp Ile Pro Arg Ile Lys Trp Thr Lys Val 65 70 75 80

Gln Thr Ala Ser Gly Gln Arg Gln Asp Leu Pro Ile Leu Val Ala Lys
85 90 95

Asp Asn Val Val Arg Val Ala Lys Gly Trp Gln Gly Arg Val Ser Leu
100 105 110

Pro	Ala	Tyr 115	Pro	Arg	His	Arg	Ala 120	Asn	Ala	Thr	Leu	Leu 125	Leu	Gly	Pro
Leu	Arg 130	Ala	Ser	Asp	Ser	Gly 135	Leu	Tyr	Arg	Cys	Gln 140	Val	Val	Lys	Gly
Ile 145	Glu	Asp	Glu	Gln	Asp 150	Leu	Val	Thr	Leu	Glu 155	Val	Thr	Gly	Val	Val 160
Phe	His	Tyr	Arg	Ala 165	Ala	Arg	Asp	Arg	Tyr 170	Ala	Leu	Thr	Phe	Ala 175	Glu
Ala	Gln	Glu	Ala 180	Cys	His	Leu	Ser	Ser 185	Ala	Thr	Ile	Ala	Ala 190	Pro	Arg
His	Leu	Gln 195	Ala	Ala	Phe	Glu	Asp 200	Gly	Phe	Asp	Asn	Cys 205	Asp	Ala	Gly
Trp	Leu 210	Ser	Asp	Arg	Thr	Val 215	Arg	Tyr	Pro	Ile	Thr 220	Gln	Ser	Arg	Pro
Gly 225	Cys	Tyr	Gly	Asp	Arg 230	Ser	Ser	Leu	Pro	Gly 235	Val	Arg	Ser	Tyr	Gly 240
Arg	Arg	Asp	Pro	Gln 245	Glu	Leu	Tyr	Asp	Val 250	Tyr	Cys	Phe	Ala	Arg 255	Glu
Leu	Gly	Gly	Glu 260	Val	Phe	Tyr	Val	Gly 265	Pro	Ala	Arg	Arg	Leu 270	Thr	Leu
Ala	Gly	Ala 275	Arg	Ala	Leu	Cys	Gln 280	Arg	Gln	Gly	Ala	Ala 285	Leu	Ala	Ser
Val	Gly 290	Gln	Leu	His	Leu	Ala 295	Trp	His	Glu	Gly	Leu 300	Asp	Gln	Cys	Asp
Pro 305	Gly	Trp	Leu	Ala	Asp 310	Gly	Ser	Val	Arg	Tyr 315	Pro	Ile	Gln	Thr	Pro 320
Arg	Arg	Arg	Cys	Gly 325	Gly	Ser	Ala	Pro	Gly 330	Val	Arg	Thr	Val	Tyr 335	Arg

THE	Aiu	ASII	340	1111	Oly	1110	110	345	110	Ciy	AIG	Arg	350	ASP	AIG
Tyr	Cys	Phe 355	Arg	Ala	His	His	His 360	Thr	Pro	Gln	Arg	Gly 365	Asp	Ser	Glu
Ile	Pro 370	Ser	Ser	Gly	Asp	Glu 375	Gly	Glu	Ile	Val	Ser 380	Ala	Glu	Gly	Pro
Pro 385	Ala	Pro	Glu	Leu	Lys 390	Pro	Arg	Leu	Gly	Glu 395	Gln	Glu	Val	Ile	Thr 400
Pro	Asp	Phe	Gln	Glu 405	Pro	Leu	Val	Ser	Ser 410	Gly	Glu	Asp	Glu	Pro 415	Leu
Asp	Leu	Thr	Arg 420	Thr	Gln	Ala	Ser	Gln 425	Glu	Thr	Leu	Ala	Ser 430	Thr	Pro
Gly	Gly	Pro 435	Thr	Leu	Ala	Ser	Trp 440	Leu	Leu	Thr	Gly	Val 445	Thr	Ser	Ser
Thr	Gly 450	Val	Pro	Ser	Pro	Ser 455	Ser	Leu	Gly	Val	Asp 460	Met	Glu	Glu	Thr
Thr 465	Pro	Ser	Gly	Thr	Gln 470	Val	Ala	Pro	Thr	Pro 475	Thr	Met	Arg	Arg	Gly 480
Arg	Phe	Lys	Gly	Leu 485	Asn	Gly	Arg	His	Phe 490	Gln	Gln	Gln	Gly	Pro 495	Glu
Asp	Gln	Leu	Leu 500	Glu	Ala	Ala	Glu	Ala 505	Ser	Ala	Gln	Pro	Pro 510	Thr	Leu
Glu	Val	Thr 515	Ala	Asp	His	Met	Gly 520	Pro	Ser	Ala	Ala	Thr 525	Glu	Ala	Leu
			_						_					_	_

Glu Ser Asp Gln Ser His Ser Pro Trp Ala Ile Leu Thr Asn Glu Val

Asp Val Pro Gly Ala Gly Ser Leu Gly Ser Arg Ser Leu Pro Glu Ser

Phe Ala Asn Arg Thr Gly Phe Pro Ala Pro Gly Ala Arg Phe Asp Ala

Arg	Lys	Trp	Ser	Pro 565	Ser	Leu	Ile	Ser	Pro 570	Ser	Thr	Val	Pro	Ser 575	Thr
Asp	Ser	Thr	Pro 580	Gly	Leu	Lys	Pro	Gly 585	Ala	Asp	Glu	Ala	Pro 590	Gly	Val
Lys	Ser	Ala 595	Ile	His	His	Pro	Pro 600	Trp	Leu	Pro	Ser	Glu 605	Pro	Ala	Val
Pro	Ser 610	Ser	Ile	Pro	Ser	Glu 615	Ala	Leu	Ser	Ala	Val 620	Ser	Leu	Gln	Ala
Ser 625	Pro	Gly	Asp	Gly	Ser 630	Pro	Asp	Phe	Pro	Ile 635	Val	Ala	Met	Leu	Arg 640
Ala	Pro	Lys	Leu	Trp 645	Leu	Leu	Pro	His	Ser 650	Thr	Leu	Val	Pro	Asn 655	Val
Ser	Pro	Ile	Pro 660	Leu	Ser	Pro	Ala	Ser 665	Pro	Leu	Pro	Ser	Ser 670	Val	Pro
Glu	Glu	Gln 675	Ala	Val	Arg	Pro	Val 680	Ser	Phe	Gly	Ala	Glu 685	Asp	Pro	Glu
Thr	Pro 690	Phe	Gln	Thr	Thr	Met 695	Ala	Ala	Pro	Gly	Glu 700	Ala	Ser	His	Gly
Ser 705	Pro	Glu	Ala	Asp	Ser 710	Ile	Glu	Ile	Glu	Gly 715	Ile	Ser	Ser	Met	Gln 720
Ala	Thr	Lys	His	Pro 725	Ile	Ser	Gly	Pro	Trp 730	Ala	Ser	Leu	Asp	Ser 735	Ser
Asn	Val	Thr	Val 740	Asn	Pro	Val	Pro	Ser 745	Asp	Ala	Gly	Ile	Leu 750	Gly	Thr
Glu	Ser	Gly 755	Val	Leu	Asp	Leu	Pro 760	Gly	Ser	Pro	Thr	Ser 765	Asp	Gly	Gln
Ala	Thr 770	Val	Asp	Met	Val	Leu 775	Ala	Thr	Trp	Leu	Pro 780	Leu	Pro	Gly	His
Gly	Leu	Asp	Thr	Gly	Ser	Gln	Ser	Thr	Pro	Met	Glu	Ala	His	Gly	Val

Thr Met Ser Val Glu Pro Thr Val Ala Leu Glu Gly Gly Ala Thr Lys 805 810 815

Asp Pro Met Glu Ala Thr Met Asp Val Val Pro Ser Thr Val Asp Ala 820 825 830

Thr Ser Gly Ser Glu Pro Lys Ser Ser Ile Ser Ser Thr His Val Val 835 840 845

Val Thr Ala Ala Gly Asp Gln Gly Thr Pro Thr Leu Thr Pro Thr Ser 850 855 860

Ser Glu Gly Gln Val Val Ala Gln Glu Ser Leu Gly Thr Leu Thr Ser 865 870 875 880

Leu Pro Ser His Pro Trp Ser Ser Leu Ala Ser Ser Met Asp Glu Val 885 890 895

Ala Ser Val Ser Ser Gly Glu Pro Thr Arg Leu Trp Asp Ile Pro Ser 900 905 910

Thr Leu Ile Pro Val Ser Leu Gly Leu Asp Glu Ser Asp Leu Lys Val 915 920 925

Val Ala Glu Ser Pro Gly Leu Glu Gly Phe Trp Glu Glu Val Ala Ser 930 935 940

Gly Gln Glu Asp Pro Thr Asp Pro Cys Glu Asn Asn Pro Cys Leu His 945 950 955 960

Gly Gly Thr Cys Arg Thr Asn Gly Thr Met Tyr Gly Cys Ser Cys Asp  $965 \hspace{1.5cm} 970 \hspace{1.5cm} 975$ 

Gln Gly Tyr Ala Gly Glu Asn Cys Glu Ile Asp Ile Asp Asp Cys Leu 980 985 990

Cys Ser Pro Cys Glu Asn Gly Gly Thr Cys Ile Asp Glu Val Asn Gly 995 1000 1005

Phe Ile ·Cys Leu Cys Leu Pro Ser Tyr Gly Gly Asn Leu Cys Glu 1010 1015 1020

- Lys Asp Thr Glu Gly Cys Asp Arg Gly Trp His Lys Phe Gln Gly 1025 1030 1035
- His Cys Tyr Arg Tyr Phe Ala His Arg Arg Ala Trp Glu Asp Ala 1040 1045 1050
- Glu Arg Asp Cys Arg Arg Arg Ala Gly His Leu Thr Ser Val His 1055 1060 1065
- Ser Pro Glu Glu His Lys Phe Ile Asn Ser Phe Gly His Glu Asn 1070 1075 1080
- Ser Trp Ile Gly Leu Asn Asp Arg Thr Val Glu Arg Asp Phe Gln 1085 1090 1095
- Trp Thr Asp Asn Thr Gly Leu Gln Tyr Glu Asn Trp Arg Glu Lys 1100 1105 1110
- Gln Pro Asp Asn Phe Phe Ala Gly Gly Glu Asp Cys Val Val Met 1115 1120 1125
- Val Ala His Glu Asn Gly Arg Trp Asn Asp Val Pro Cys Asn Tyr 1130 1135 1140
- Asn Leu Pro Tyr Val Cys Lys Lys Gly Thr Val Leu Cys Gly Pro 1145 1150 1155
- Pro Pro Ala Val Glu Asn Ala Ser Leu Val Gly Val Arg Lys Val 1160 1165 1170
- Lys Tyr Asn Val His Ala Thr Val Arg Tyr Gln Cys Asp Glu Gly 1175 1180 1185
- Phe Ser Gln His His Val Ala Thr Ile Arg Cys Arg Ser Asn Gly 1190 1195 1200
- Lys Trp Asp Arg Pro Gln Ile Val Cys Thr Lys Pro Arg Arg Ser 1205 1210 1215
- His Arg Met Arg Arg His His His Pro His Arg His His Lys 1220 1225 1230

Pro Arg Lys Glu His Arg Lys His Lys Arg His Pro Ala Glu Asp 1235 1240 1245

Trp Glu Lys Asp Glu Gly Asp Phe Cys 1250 1255

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<212> DNA

<213> Mus musculus

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Arg Leu Ser Ser Leu Arg Asp Ile Pro Arg Ile Lys Trp Thr Lys Val 65 70 75 80

Gln Thr Ala Ser Gly Gln Arg Gln Asp Leu Pro Ile Leu Val Ala Lys 85 90 95

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Pro Ala Tyr Pro Arg His Arg Ala Asn Ala Thr Leu Leu Gly Pro 115 120 125

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His Leu Glm	. Ala Ala Ph	e Glu Asp 200	Gly Phe	Asp Asn	Cys Asp 205	Ala Gly
Trp Leu Ser 210	Asp Arg Th	r Val Arg 215	Tyr Pro	Ile Thr 220	Gln Ser	Arg Pro
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Val Gly Gln Leu His Leu Ala Trp His Glu Gly Leu Asp Gln Cys Asp 290 295 300

Pro Gly Trp Leu Ala Asp Gly Ser Val Arg Tyr Pro Ile Gln Thr Pro 305 310 315 320

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- Ser Thr His Ile Ala Val Thr Met Ala Arg Ala Gln Gly Met Pro Thr 850 855 860
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- Thr Gly Leu Gln Tyr Glu Asn Trp Arg Glu Lys Gln Pro Asp Asn 1115 1120 1125
- Phe Phe Ala Gly Gly Glu Asp Cys Val Val Met Val Ala His Glu 1130 1135 1140
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Val Asp Leu Leu Gln Phe Ser Thr Ser Gln Pro Glu Ala Leu Leu 50 55 60

Leu Leu Ala Ala Gly Gln Thr Asp His Leu Leu Gln Leu Gln Ser 70 75 80

Gly His Leu Gln Val Arg Leu Ala Leu Gly Gln Asn Glu Leu Ser Leu 85 90 95

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Tyr Gly Leu Phe Val Gly Ser Ser Gly Ser Leu Asp Leu Pro Tyr Leu 145 150 155 160

Lys Gly Ile Ser Arg Pro Leu Arg Gly Cys Leu His Ser Ala Ile Leu 165 170 175

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Cys Ala Glu Glu Phe Ser Ala Gly Asp Glu Val Gly Leu Gly Phe Ser 195 200 205

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- Val Glu Gln Gly Arg Val Arg Tyr Leu Ser Thr Asp Pro Gln His His
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- Thr Gln Asp Thr Val Glu Asp Leu Thr Leu Glu Val Gln Val Gly Gln 755 760 765
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- Glu Thr Leu Thr Ser Ala His Leu Glu Ala Ser Leu Glu Glu Glu Gly 805 810 815
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- Ser Phe Asp Ala Ala Cys Pro Gln Arg Pro Ser Arg Leu Trp Arg 1700 1705 1710
- Asn Lys Gly Leu Trp Val Pro Glu Gly Gln Arg Ala Lys Ile Thr 1715 1720 1725
- Val Ala Ala Leu Asp Ala Ala Asn Leu Leu Ala Ser Val Pro Ala 1730 1735 1740
- Ser Gln Arg Gly Arg His Asp Val Leu Phe Gln Ile Thr Gln Phe

1745 1750 1755

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Val	Tyr 1790	Ala	His	Gly	Gly	Gly 1795	Gly	Thr	Gln	Gln	Asp 1800	Gly	Phe	Arg
Phe	Arg 1805	Ala	His	Leu	Gln	Gly 1810	Pro	Thr	Gly	Ala	Ser 1815	Val	Ala	Gly
Pro	Gln 1820	Thr	Ser	Glu	Ala	Phe 1825	Val	Ile	Thr	Val	Arg 1830	Asp	Val	Asn
Glu	Arg 1835	Pro	Pro	Gln	Pro	Gln 1840	Ala	Ser	Ile	Pro	Leu 1845	Arg	Ile	Thr
Arg	Gly 1850	Ser	Arg	Ala	Pro	Val 1855		Arg	Ala	Gln	Leu 1860	Ser	Val	Val
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Ala	Pro 1880	His	Asn	Gly	Phe	Leu 1885	Ser	Leu	Ala	Gly	Asp 1890	Asn	Thr	Gly
Pro	Val 1895	Thr	His	Phe	Thr	Gln 1900	Ala	Asp	Val	Asp	Ala 1905	Gly	Arg	Leu
Ala	Phe 1910	Val	Ala	Asn	Gly	Ser 1915		Val	Ala	Gly	Val 1920	Phe	Gln	Leu
Ser	Met 1925	Ser	Asp	Gly	Ala	Ser 1930	Pro	Pro	Ile	Pro	Met 1935	Ser	Leu	Ala
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- Gln Leu Gln Val Ile Ser Asp Arg Glu Glu Pro Asp Val Ala Tyr 1970 1975 1980
- Arg Leu Thr Gln Gly Pro Leu Tyr Gly Gln Val Leu Val Gly Gly 1985 1990 1995
- Gln Pro Ala Ser Ala Phe Ser Gln Leu Gln Val Asp Gln Gly Asp 2000 2005 2010
- Val Val Phe Ala Phe Thr Asn Phe Ser Ser Ser Gln Asp His Phe 2015 2020 2025
- Lys Val Leu Ala Leu Ala Arg Gly Val Asn Ala Ser Ala Thr Val 2030 2035 2040
- Asn Val Thr Val Gln Ala Leu Leu His Val Trp Ala Gly Gly Pro 2045 2050 2055
- Trp Pro Gln Gly Thr Thr Leu Arg Leu Asp Pro Thr Val Leu Asp 2060 2065 2070
- Ala Ser Glu Leu Ala Asn Arg Thr Gly Ser Met Pro Arg Phe Arg 2075 2080 2085
- Leu Leu Glu Gly Pro Arg Tyr Gly Arg Val Val Arg Val Ser Gln 2090 2095 2100
- Gly Arg Ala Glu Ser Arg Thr Asn Gln Leu Val Glu Asp Phe Thr 2105 2110 2115
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- Pro Glu Gly Arg Ser Thr Gly Pro Thr Gly Asp Arg Leu Thr Leu 2135 2140 2145
- Glu Leu Gln Ala Thr Gly Val Pro Pro Ala Val Ala Leu Leu Asp 2150 2155 2160
- Phe Ala Thr Glu Pro Tyr His Ala Ala Lys Phe Tyr Lys Val Thr 2165 2170 2175

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Pro	Met 2210	Pro	Thr	Val	Ala	Lys 2215	Ser	Gly	Phe	Leu	Gly 2220	Phe	Leu	Glu	
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Leu	Leu 2240	Ala	Leu	Ile	Leu	Pro 2245	Leu	Leu	Phe	Tyr	Leu 2250	Arg	Lys	Arg	
Asn	Lys 2255	Thr	Gly	Lys	His	Asp 2260	Val	Gln	Val	Leu	Thr 2265	Ala	Lys	Pro	
Arg	Asn 2270	Gly	Leu	Ala	Gly	Asp 2275	Thr	Glu	Thr	Phe	Arg 2280	Lys	Val	Glu	
Pro	Gly 2285	Gln	Ala	Ile	Pro	Leu 2290	Thr	Thr	Val	Pro	Gly 2295	Gln	Gly	Pro	
Pro	Pro 2300	Gly	Gly	Gln	Pro	Asp 2305	Pro	Glu	Leu	Leu	Gln 2310	Phe	Cys	Arg	
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Val Asp Leu Leu Gln Phe Ser Thr Ser Gln Pro Glu Ala Leu Leu 50 55 60

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Gly Cys Leu Gln Val Arg Leu Ala Leu Gly Gln Lys Glu Leu Lys Leu 85 90 95

Gln Thr Pro Ala Asp Thr Val Leu Ser Asp Ser Ala Pro His Thr Val 100 105 110

Val Leu Thr Val Ser Asp Ser Trp Ala Val Leu Ser Val Asp Gly Val 115 120 125

Leu Asn Thr Ser Ala Pro Ile Pro Arg Ala Ser His Leu Lys Ala Thr 130 135 140

Tyr Gly Leu Phe Val Gly Ser Ser Gly Ser Leu Asp Leu Pro Tyr Leu 145 150 155 160

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Glu 385	Asp	Glu	Tyr	Glu	Glu 390	Glu	Val	Tyr	Gly	Pro 395	Tyr	Glu	Thr	Phe	Ser 400
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	610	-	Glu			615					620				
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Phe Arg Val Ser Asp Gly Met Gln Ala Ser Ala Pro Ala Thr Leu Lys

Val Val Ala Val Arg Pro Ala Ile Gln Ile Leu His Asn Thr Gly Leu 660 665 670

His Leu Ala Gln Gly Ser Ala Ala Ile Leu Pro Ala Asn Leu Ser 675 680 685

Val Glu Thr Asn Ala Val Gly Gln Asp Val Ser Val Leu Phe Arg Val 690 700

Thr Gly Thr Leu Gln Phe Gly Glu Leu Gln Lys Gln Gly Ala Gly Gly 705 710 715 720

Val Glu Gly Thr Glu Trp Trp Asp Thr Leu Ala Phe His Gln Arg Asp
725 730 735

Val Glu Gln Gly Arg Val Arg Tyr Leu Ser Thr Asp Pro Gln His His 740 745 750

Thr Gln Asp Thr Val Glu Asp Leu Ile Leu Glu Val Gln Val Gly Gln 755 760 765

Glu Thr Leu Ser Asn Leu Ser Phe Pro Val Thr Ile Gln Arg Ala Thr 770 775 780

Val Trp Met Leu Arg Leu Glu Pro Leu His Thr Gln Asn Pro His Gln 785 790 795 800

Glu Thr Leu Thr Pro Ala His Leu Glu Ala Ser Leu Glu Glu Glu 805 810 815

Glu Glu Gly Ser Pro Gln Pro His Thr Phe His Tyr Glu Leu Val Gln 820 825 830

Ala Pro Arg Arg Gly Asn Leu Leu Gln Gly Thr Arg Leu Ser Asp 835 840 845

Gly Glu Ser Phe Ser Gln Ser Asp Leu Gln Ala Gly Arg Val Thr Tyr 850 855 860

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- Met Val Pro Glu Gly Gly Glu Gly Val Leu Ser Ala Asp His Leu Phe 915 920 925
- Val Lys Ser Leu Asn Ser Ala Ser Tyr Leu Tyr Glu Val Met Glu Gln 930 935 940
- Pro His His Gly Lys Leu Ala Trp Arg Asp Pro Lys Gly Lys Ser Thr 945 950 955 960
- Pro Val Thr Ser Phe Thr Asn Glu Asp Leu Leu His Gly Arg Leu Val 965 970 975
- Tyr Gln His Asp Asp Ser Glu Thr Ile Glu Asp Asp Ile Pro Phe Val 980 985 990
- Ala Thr Arg Gln Gly Glu Gly Ser Gly Asp Met Ala Trp Glu Glu Val 995 1000 1005
- Arg Gly Val Phe Arg Val Ala Ile Gln Pro Val Asn Asp His Ala 1010 1015 1020
- Pro Val Gln Thr Ile Ser Arg Val Phe His Val Ala Arg Gly Gly 1025 1030 1035
- Gln Arg Leu Leu Thr Thr Asp Asp Val Ala Phe Ser Asp Ala Asp 1040 1045 1050
- Ser Gly Phe Ser Val Ala Gln Leu Val Leu Thr Arg Lys Asp Leu 1055 1060 1065
- Leu Phe Gly Ser Ile Val Ala Met Glu Glu Pro Thr Arg Pro Ile 1070 1075 1080
- Tyr Arg Phe Thr Gln Glu Asp Leu Arg Lys Lys Gln Val Leu Phe 1085 1090 1095

- Val His Ser Gly Ala Asp His Gly Trp Leu Gln Leu Gln Val Ser 1100 1105 1110
- Asp Gly Gln His Gln Ala Thr Ala Met Leu Glu Val Gln Ala Ser 1115 1120 1125
- Glu Pro Tyr Leu His Val Ala Asn Ser Ser Ser Leu Val Val Pro 1130 1135 1140
- Gln Gly Gly Gln Gly Thr Ile Asp Thr Ala Val Leu Gln Leu Asp 1145 1150 1155
- Thr Asn Leu Asp Ile Arg Ser Gly Asn Glu Val His Tyr His Val 1160 1165 1170
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- Val Thr Ser Phe Ser Gln Arg Asp Leu Leu Asp Gly Ala Ile Leu 1190 1195 1200
- Tyr Ser His Asn Gly Ser Leu Ser Pro Gln Asp Thr Leu Ala Phe 1205 1210 1215
- Ser Val Ala Ala Gly Pro Val His Thr Asn Thr Phe Leu Gln Val 1220 1225 1230
- Thr Ile Ala Leu Glu Gly Pro Leu Ala Pro Leu Gln Leu Val Gln 1235 1240 1245
- His Lys Lys Ile Tyr Val Phe Gln Gly Glu Ala Ala Glu Ile Arg 1250 1255 1260
- Arg Asp Gln Leu Glu Val Val Gln Glu Ala Val Leu Pro Ala Asp 1265 1270 1275
- Ile Met Phe Ser Leu Arg Ser Pro Pro Asn Ala Gly Tyr Leu Val 1280 1285 1290
- Met Val Ser His Gly Ala Ser Ala Glu Glu Pro Pro Ser Leu Asp 1295 1300 1305

- Pro Val Gln Ser Phe Ser Gln Glu Ala Val Asn Ser Gly Arg Val 1310 1315 1320
- Leu Tyr Leu His Ser Arg Pro Gly Ala Trp Ser Asp Ser Phe Ser 1325 1330 1335
- Leu Asp Val Ala Ser Gly Leu Gly Asp Pro Leu Glu Gly Ile Ser 1340 1345 1350
- Val Glu Leu Glu Val Leu Pro Thr Val Ile Pro Leu Asp Val Gln 1355 1360 1365
- Asn Phe Ser Val Pro Glu Gly Gly Thr Arg Thr Leu Ala Pro Pro 1370 1375 1380
- Leu Val Gln Ile Thr Gly Pro Tyr Phe Pro Thr Leu Pro Gly Leu 1385 1390 1395
- Val Leu Gln Val Leu Glu Pro Pro Gln His Gly Ala Leu Gln Lys 1400 1405 1410
- Glu Asp His Ser Gln Asp Gly Ser Leu Ser Thr Phe Ser Arg Arg 1415 1420 1425
- Glu Val Glu Glu Gln Leu Ile Arg Tyr Val His Asp Gly Ser Glu 1430 1435 1440
- Thr Gln Thr Asp Ala Phe Val Leu Leu Ala Asn Ala Ser Glu Met 1445 1450 1455
- Asp Arg Gln Ser Gln Pro Val Ala Phe Thr Ile Thr Ile Leu Pro 1460 1465 1470
- Val Asn Asp Gln Pro Pro Val Leu Thr Thr Asn Thr Gly Leu Gln 1475 1480 1485
- Ile Trp Glu Gly Ala Ile Val Pro Ile Pro Pro Glu Ala Leu Arg 1490 1495 1500
- Gly Thr Asp Asn Asp Ser Gly Pro Glu Asp Leu Val Tyr Thr Ile 1505 1510 1515
- Glu Glu Pro Ser Asn Gly Arg Ile Ala Leu Arg Val Ala Pro Asp

1520 1525 1530

Thr	Glu 1535	Val	His	Arg	Phe	Thr 1540	Gln	Ala	Gln	Leu	Asp 1545	Gly	Gly	Leu
Val	Leu 1550	Phe	Ser	His	Arg	Gly 1555	Ala	Leu	Glu	Gly	Gly 1560	Phe	His	Phe
Asp	Leu 1565	Ser	Asp	Gly	Ala	His 1570		Ser	Pro	Gly	His 1575	Phe	Phe	Arg
Val	Val 1580	Ala	Gln	Lys	Gln	Ala 1585	Leu	Leu	Ser	Leu	Glu 1590	Gly	Thr	Arg
Lys ·		Thr	Val	Cys	Pro	Glu 1600	Ser	Val	Gln	Pro	Leu 1605	Ser	Ser	Gln
Ser	Leu 1610	Ser	Ala	Ser	Ser	Ser 1615	Thr	Gly	Ala	Asp	Pro 1620	Arg	His	Leu
Leu	Tyr 1625	Arg	Val	Val	Arg	Gly 1630	Pro	Gln	Leu	Gly	Arg 1635	Leu	Leu	His
Ala	Gln 1640		Gly	Ser	Ala	Glu 1645		Val	Leu	Val	Asn 1650	Phe	Thr	Gln
Ala	Glu 1655	Val	Asn	Ala	Gly	Asn 1660	Ile	Leu	Tyr	Glu	His 1665	Glu	Met	Ser
Ser	Glu 1670	Pro	Phe	Trp	Glu	Ala 1675	His	Asp	Thr	Ile	Gly 1680	Leu	Leu	Leu
Ser	Ser 1685	Pro	Pro	Ala	Arg	Asp 1690	Leu	Ala	Ala	Thr	Leu 1695	Ala	Val	Met
Val	Ser 1700	Phe	Asp	Ala	Ala	Cys 1705	Pro	Gln	Arg	Pro	Ser 1710	Arg	Leu	Trp
Lys	Asn 1715	Lys	Gly	Leu	Trp	Val 1720	Pro	Glu	Gly	Gln	Arg 1725	Ala	Lys	Ile
Thr	Val 1730	Ala	Ala	Leu	Asp	Ala 1735	Ala	Asn	Leu	Leu	Ala 1740	Ser	Val	Pro

- Ala Ser Gln Arg Ser Arg His Asp Val Leu Phe Gln Val Thr Gln 1745 1750 1755
- Phe Pro Thr Arg Gly Gln Leu Leu Val Ser Glu Glu Pro Leu His 1760 1765 1770
- Ala Arg Arg Pro Tyr Phe Leu Gln Ser Glu Leu Ala Ala Gly Gln 1775 1780 1785
- Leu Val Tyr Ala His Gly Gly Gly Gly Thr Gln Gln Asp Gly Phe 1790 1795 1800
- Arg Phe Arg Ala His Leu Gln Gly Pro Thr Gly Thr Ser Val Ala 1805 1810 1815
- Gly Pro Gln Thr Ser Glu Ala Phe Val Ile Thr Val Arg Asp Val 1820 1825 1830
- Asn Glu Arg Pro Pro Gln Pro Gln Ala Ser Ile Pro Leu Arg Val 1835 1840 1845
- Thr Arg Gly Ser Arg Ala Pro Val Ser Arg Ala Gln Leu Ser Val 1850 1855 1860
- Val Asp Pro Asp Ser Ala Pro Gly Glu Ile Glu Tyr Glu Val Gln 1865 1870 1875
- Arg Ala Pro His Asn Gly Phe Leu Ser Leu Ala Gly Asp Asn Thr 1880 1885 1890
- Gly Pro Val Thr His Phe Thr Gln Ala Asp Val Asp Ala Gly Arg 1895 1900 1905
- Leu Ala Phe Val Ala Asn Gly Ser Ser Val Ala Gly Val Phe Gln 1910 1915 1920
- Leu Ser Met Ser Asp Glu Ala Ser Pro Pro Ile Pro Met Ser Leu 1925 1930 1935
- Ala Val Asp Val Leu Pro Ser Thr Ile Glu Val Gln Leu Arg Ala 1940 1945 1950

Pro Leu Glu Val Pro Gln Ala Leu Gly Arg Thr Ser Leu Ser Arg Gln Gln Leu Gln Val Ile Ser Asp Arg Glu Glu Pro Asp Val Ala Tyr Arg Leu Thr Gln Gly Pro Leu Tyr Gly Gln Leu Leu Val Gly Gly Arg Pro Ala Ser Ala Phe Ser Gln Leu Gln Val Asp Gln Gly Asp Val Val Phe Val Phe Thr Asn Phe Ser Ser Ser Gln Asp His Phe Lys Val Val Ala Leu Ala Arg Gly Val Asn Ala Ser Ala Thr Val Asn Val Thr Val Gln Ala Leu Leu His Val Trp Ala Gly Gly Pro Trp Pro Gln Gly Thr Thr Leu Arg Leu Asp Pro Thr Val Leu Asp Ala Ser Glu Leu Ala Asn Arg Thr Gly Ser Met Pro His Phe Arg Leu Leu Ala Glu Pro Arg Tyr Gly Arg Val Val Arg Val Ser Gln Gly Arg Thr Glu Ser Arg Ser Asn Gln Leu Val Glu His Phe Thr Gln Arg Asp Leu Glu Glu Gly Gln Leu Gly Leu Glu Val Gly Lys Pro Glu Gly Arg Ser Thr Gly Pro Ala Gly Asp Arg Leu Thr Leu Glu Leu Trp Ala Lys Gly Val Pro Pro Ala Val Ala Leu Leu 

Asp	Phe 2165		Thr	Glu	Pro	Tyr 2170	His	Ala	Ala	Lys	Ser 2175	Tyr	Ser	Val		
Ala	Leu 2180	Leu	Ser	Val	Pro	Glu 2185	Ala	Val	Arg	Thr	Glu 2190	Thr	Glu	Lys		
Pro	Gly 2195	Arg	Ser	Val	Pro	Thr 2200	Gly	Gln	Pro	Gly	Arg 2205	Thr	Ala	Ser		
Ser	Pro 2210	Val	Pro	Thr	Ala	Ala 2215	Lys	Gly	Gly	Phe	Leu 2220	Gly	Phe	Leu		
Glu	Ala 2225	Asn	Met	Phe	Ser	Ile 2230	Ile	Ile	Pro	Val	Cys 2235	Leu	Ile	Leu		
Leu	Leu 2240		Ala	Leu	Ile	Leu 2245	Pro	Leu	His	Phe	Tyr 2250	Leu	Arg	Lys		
Arg	Asn 2255	_	Thr	Gly	Lys	His 2260	Asp	Val	Gln	Val	Leu 2265	Thr	Ala	Lys		
Pro	Arg 2270	Asn	Gly	Leu	Ala	Gly 2275	Asp	Thr	Glu	Thr	Phe 2280	Arg	Lys ´	Val		
Glu	Pro 2285		Gln	Ala	Ile	Pro 2290	Leu	Ile	Thr	Val	Pro 2295	Gly	Gln	Gly		
Pro	Ser 2300	Pro	Gly	Gly	Gln	Pro 2305	Asp	Pro	Glu	Leu	Leu 2310	Gln	Phe	Cys		
Arg	Thr 2315	Pro	Asn	Pro	Ala	Leu 2320	Arg	Asn	Gly	Gln	Tyr 2325	Trp	Val			
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<400			accad	atcad	c cac	gcatco	ccc t	tatet	caat	a tt	cccad	ctct	ctad	cacccta	60	)
														cctgcag	120	
agct	tect	cg cg	gtgc	gttca	a gct	cactg	cgc g	gtgtg	gtcgo	cc to	ggacto	gggc	ttat	ggatac	180	ı
taca	agacaa	ac ag	gagaa	aaact	t tgt	tgaag	gag a	attgg	gctgg	gt co	ctatac	cagg	agca	actaaat	240	)

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<sup>&</sup>lt;210> 30

Met Arg Ile Leu Gln Ser Phe Leu Ala Cys Val Gln Leu Leu Cys Val

<sup>&</sup>lt;211> 1616

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Rattus norvegicus

<sup>&</sup>lt;400> 30

1

Cys Arg Leu Asp Trp Ala Tyr Gly Tyr Tyr Arg Gln Gln Arg Lys Leu 20 25 30

Val Glu Glu Ile Gly Trp Ser Tyr Thr Gly Ala Leu Asn Gln Lys Asn 35 40 45

Trp Gly Lys Lys Tyr Pro Ile Cys Asn Ser Pro Lys Gln Ser Pro Ile 50 55 60

Asn Ile Asp Glu Asp Leu Thr Gln Val Asn Val Asn Leu Lys Lys Leu 65 70 75 80

Lys Phe Gln Gly Trp Glu Lys Pro Ser Leu Glu Asn Thr Phe Ile His 85 90 95

Asn Thr Gly Lys Thr Val Glu Ile Asn Leu Thr Asn Asp Tyr Tyr Leu 100 105 110

Ser Gly Gly Leu Ser Glu Lys Val Phe Lys Ala Ser Lys Met Thr Phe 115 120 125

His Trp Gly Lys Cys Asn Val Ser Ser Glu Gly Ser Glu His Ser Leu 130 135 140

Glu Gly Gln Lys Phe Pro Leu Glu Met Gln Ile Tyr Cys Phe Asp Ala 145 150 155 160

Asp Arg Phe Ser Ser Phe Glu Glu Thr Val Lys Gly Lys Gly Arg Leu 165 170 175

Arg Ala Leu Ser Ile Leu Phe Glu Ile Gly Val Glu Glu Asn Leu Asp 180 185 190

Tyr Lys Ala Ile Ile Asp Gly Thr Glu Ser Val Ser Arg Phe Gly Lys
195 200 205

Gln Ala Ala Leu Asp Pro Phe Ile Leu Gln Asn Leu Leu Pro Asn Ser 210 215 220

Thr Asp Lys Tyr Tyr Ile Tyr Asn Gly Ser Leu Thr Ser Pro Pro Cys 235 230 235

Thr	Asp	Thr	Val	Glu 245	Trp	Ile	Val	Phe	Lys 250	Asp	Thr	Val	Ser	Ile 255	Ser
Glu	Ser	Gln	Leu 260	Ala	Val	Phe	Cys	Glu 265	Val	Leu	Thr	Met	Gln 270	Gln	Ser
Gly	Tyr	Val 275	Met	Leu	Met	Asp	Tyr 280	Leu	Gln	Asn	Asn	Phe 285	Arg	Glu	Gln
Gln	Tyr 290	Lys	Phe	Ser	Arg	Gln 295	Val	Phe	Ser	Ser	Tyr 300	Thr	Gly	Lys	Glu
Glu 305	Ile	His	Glu	Ala	Val 310	Cys	Ser	Ser	Glu	Pro 315	Glu	Asn	Val	Gln	Ala 320
Asp	Pro	Glu	Asn	Tyr 325	Thr	Ser	Leu	Leu	Ile 330	Thr	Trp	Glu	Arg	Pro 335	Arg
Val	Val	Tyr	Asp 340	Thr	Met	Ile	Glu	Lys 345	Phe	Ala	Val	Leu	Tyr 350	Gln	Pro
Leu	Glu	Gly 355	Asn	Asp	Gln	Thr	Lys 360	His	Glu	Phe	Leu	Thr 365	Asp	Gly	Tyr
Gln	Asp 370	Leu	Gly	Ala	Ile	Leu 375	Asn	Asn	Leu	Ile	Pro 380	Asn	Met	Ser	Tyr
Val 385	Leu	Gln	Ile	Val	Ala 390	Ile	Cys	Ser	Asn	Gly 395	Leu	Tyr	Gly	Lys	Tyr 400
Ser	Asp	Gln	Leu	Ile 405	Val	Asp	Met	Pro	Thr 410	Glu	Asp	Ala	Glu	Leu 415	Asp
Leu	Phe	Pro	Glu 420	Leu	Ile	Gly	Thr	Glu 425	Glu	Ile	Ile	Lys	Glu 430	Glu	Asn
Tyr	Gly	Lys 435	Gly	Asn	Glu	Glu	Asp 440	Thr	Gly	Leu	Asn	Pro 445	Gly	Arg	Asp
Ser	Ala 450	Thr	Asn	Gln	Ile	Arg 455	Lys	Lys	Glu	Pro	Gln 460	Val	Ser	Thr	Thr

Thr 465	His	Tyr	Asn	His	Met 470	Gly	Thr	Lys	Tyr	Asn 475	Glu	Ala	Lys	Thr	Asn 480
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Asn	Thr	Ser	Leu 500	Asn	Pro	Thr	Ser	Gln 505	Gln	Val	Ala	Glu	Phe 510	Asn	Pro
Glu	Arg	Glu 515	Met	Ser	Leu	Pro	Ser 520	Gln	Ile	Gly	Thr	Asn 525	Leu	Pro	Pro
His	Ser 530	Val	Glu	Gly	Thr	Ser 535	Ala	Ser	Leu	Asn	Ser 540	Gly	Ser	Lys	Thr
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Asp	Ser	Ser 595	Gly	Ser	Ser	Pro	Ala 600	Ser	Ser	Thr	Val	Pro 605	Phe	Ser	Thr
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Val 625	Thr	Tyr	Asp	Val	Leu 630	Arg	Pro	Glu	Ser	Thr 635	Arg	Asn	Ala	Leu	Glu 640
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Phe	Gln 690	Val	Asp	Glu	Ser	Arg 695	Glu	Thr	Thr	Glu	Thr 700	Phe	Ser	Pro	Asp
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Tyr	Ser	Thr	Phe	Ala 725	Tyr	Pro	Pro	Thr	Glu 730	Val	Thr	Ser	His	Ala 735	Phe
Thr	Pro	Ser	Ser 740	Arg	Pro	Leu	Asp	Leu 745	Ala	Pro	Thr	Ser	Asn 750	Ile	Leu
His	Ser	Gln 755	Thr	Thr	Gln	Pro	Val 760	Tyr	Asn	Gly	Glu	Thr 765	Pro	Leu	Gln
Pro	Ser 770	Tyr	Ser	Ser	Glu	Val 775	Phe	Pro	Leu	Val	Thr 780	Pro	Leu	Leu	Leu
Asp 785	Asn	Gln	Thr	Leu	Asn 790	Thr	Thr	Pro	Ala	Ala 795	Ser	Ser	Ser	Asp	Ser 800
Ala	Leu	His	Ala	Thr 805	Pro	Val	Phe	Pro	Ser 810	Val	Gly	Val	Ser	Phe 815	Asp
Ser	Ile	Leu	Ser 820	Ser	Tyr	Asp	Asp	Ala 825	Pro	Leu	Leu	Pro	Phe 830	Ser	Ser
Ala	Ser	Phe 835	Ser	Ser	Asp	Leu	Phe 840	His	His	Leu	His	Thr 845	Val	Ser	Gln
Thr	Leu 850	Pro	Gln	Val	Thr	Ser 855	Ala	Ala	Glu	Arg	Asp 860	Glu	Leu	Ser	Leu
His 865	Ala	Ser	Leu	Leu	Val 870	Ala	Gly	Gly	Asp	Leu .875	Leu	Leu	Glu	Pro	Ser 880
Leu	Val	Gln	Tyr	Ser 885	Asp	Val	Met	Ser	His 890	Gln	Val	Thr	Ile	His 895	Ala
Ala	Ser	Asp	Thr 900	Leu	Glu	Phe	Gly	Ser 905	Glu	Ser	Ala	Val	Leu 910	Tyr	Lys

Thr Ser Met Val Ser Gln Ile Glu Ser Pro Ser Ser Asp Val Val Met

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His Ala Tyr Ser Ser Gly Pro Glu Thr Ser Tyr Ala Ile Glu Gly Ser 930 935 940

His His Val Leu Thr Val Ser Ser Ser Ala Ile Pro Val His Asp 945 950 955 960

Ser Val Gly Val Ala Asp Gln Gly Ser Leu Leu Ile Asn Pro Ser His 965 970 975

Ile Ser Leu Pro Glu Ser Ser Phe Ile Thr Pro Thr Ala Ser Leu Leu 980 985 990

Gln Leu Pro Pro Ala Leu Ser Gly Asp Gly Glu Trp Ser Gly Ala Ser 995 1000 1005

Ser Asp Ser Glu Leu Leu Pro Asp Thr Asp Gly Leu Arg Thr 1010 1015 1020

Leu Asn Met Ser Ser Pro Val Ser Val Ala Asp Phe Thr Tyr Thr 1025 1030 1035

Thr Ser Val Ser Gly Asp Asp Ile Lys Pro Leu Ser Lys Gly Glu 1040 1045 1050

Met Met Tyr Gly Asn Glu Thr Glu Leu Lys Met Ser Ser Phe Ser 1055 1060 1065

Asp Met Ala Tyr Pro Ser Lys Ser Thr Val Val Pro Lys Met Ser 1070 1075 1080

Asp Ile Val Asn Lys Trp Ser Glu Ser Leu Lys Glu Thr Ser Val 1085 1090 1095

Ser Val Ser Ser Ile Asn Ser Val Phe Thr Glu Ser Leu Val Tyr 1100 1105 1110

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- Gly Asp Thr Trp Leu Lys Pro Gly Leu Ser Thr Asn Ser Glu Pro 1145 1150 1155
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- Gln Pro Leu Leu Tyr Glu Ala Ala Ser Pro Phe Asn Thr Glu Ala 1175 1180 1185
- Leu Leu Gln Pro Ser Phe Pro Ala Ser Asp Val Asp Thr Leu Leu 1190 1195 1200
- Lys Thr Ala Leu Pro Ser Gly Pro Arg Asp Pro Val Leu Thr Glu 1205 1210 1215
- Thr Pro Met Val Glu Gln Ser Ser Ser Ser Val Ser Leu Pro Leu 1220 1225 1230
- Ala Ser Glu Ser Ala Ser Ser Lys Ser Thr Leu His Phe Thr Ser 1235 1240 1245
- Val Pro Val Leu Asn Met Ser Pro Ser Asp Val His Pro Thr Ser 1250 1255 1260
- Leu Gln Arg Leu Thr Val Pro His Ser Arg Glu Glu Tyr Phe Glu 1265 1270 1275
- Gln Gly Leu Leu Lys Ser Lys Ser Pro Gln Gln Val Leu Pro Ser 1280 1285 1290
- Leu His Ser His Asp Glu Phe Phe Gln Thr Ala His Leu Asp Ile 1295 1300 1305
- Ser Gln Ala Tyr Pro Pro Lys Gly Arg His Ala Phe Ala Thr Pro 1310 1315 1320
- Ile Leu Ser Ile Asn Glu Pro Gln Asn Thr Leu Ile Asn Arg Leu 1325 1330 1335
- Val Tyr Ser Glu Asp Ile Phe Met His Pro Glu Ile Ser Ile Thr 1340 1345 1350

- Asp Lys Ala Leu Thr Gly Leu Pro Thr Thr Val Ser Asp Val Leu 1355 1360 1365
- Ile Ala Thr Asp His Ser Val Pro Leu Gly Ser Gly Pro Ile Ser 1370 1375 1380
- Met Thr Thr Val Ser Pro Asn Arg Asp Asp Ser Val Thr Thr Thr 1385 1390 1395
- Lys Leu Leu Pro Ser Lys Ala Thr Ser Lys Pro Thr His Ser 1400 1405 1410
- Ala Arg Ser Asp Ala Asp Leu Val Gly Gly Gly Glu Asp Gly Asp 1415 1420 1425
- Asp Tyr Asp Asp Asp Asp Tyr Asp Asp Ile Asp Ser Asp Arg Phe 1430 1435 1440
- Pro Val Asn Lys Cys Met Ser Cys Ser Pro Tyr Arg Glu Ser Gln 1445 1450 1455
- Glu Lys Val Met Asn Asp Ser Asp Thr Gln Glu Ser Ser Léu Val 1460 1465 1470
- Asp Gln Ser Asp Pro Ile Ser His Leu Leu Ser Glu Asn Thr Glu 1475 1480 1485
- Glu Glu Asn Gly Gly Thr Gly Val Thr Arg Val Asp Lys Ser Pro 1490 1495 1500
- Asp Lys Ser Pro Pro Pro Ser Met Leu Pro Gln Lys His Asn Asp 1505 1510 1515
- Gly Arg Glu Asp Arg Asp Ile Gln Met Gly Ser Ala Val Leu Pro 1520 1530
- His Thr Pro Gly Ser Lys Ala Trp Ala Val Leu Thr Ser Asp Glu 1535 1540 1545
- Glu Ser Gly Ser Gly Gln Gly Thr Ser Asp Ser Leu Asn Asp Asn 1550 1560

Glu Thr Ser Thr Asp Phe Ser Phe Pro Asp Val Asn Glu Lys Asp 1565 1570 1575

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Trp Gly Lys Lys Tyr Pro Ile Cys Asn Ser Pro Lys Gln Ser Pro Ile 50 55 60

Asn Ile Asp Glu Asp Leu Thr Gln Val Asn Val Asn Leu Lys Lys Leu 65 70 75 80

Lys Phe Gln Gly Trp Glu Lys Ala Ser Leu Glu Asn Thr Phe Ile His
85 90 95

Asn Thr Gly Lys Thr Val Glu Ile Asn Leu Thr Asn Asp Tyr Tyr Leu 100 105 110

- Ser Gly Gly Leu Ser Glu Lys Val Phe Lys Ala Ser Lys Ile Thr Phe 115 120 125
- His Trp Gly Lys Cys Asn Val Ser Ser Glu Gly Ser Glu His Ser Leu 130 135 140
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- Arg Arg Leu Ser Ile Leu Phe Glu Val Gly Val Glu Glu Asn Leu Asp 180 185 190
- Tyr Lys Ala Ile Ile Asp Gly Thr Glu Ser Val Ser Arg Phe Gly Lys 195 200 205
- Gln Ala Ala Leu Asp Pro Phe Val Leu Gln Asn Leu Leu Gln Asn Ser 210 215 220
- Thr Asp Lys Tyr Tyr Ile Tyr Asn Gly Ser Leu Thr Ser Pro Pro Cys 235 230 235
- Thr Asp Thr Val Glu Trp Ile Val Phe Lys Asp Thr Val Ser Ile Ser 245 250 255
- Glu Ser Gln Leu Ala Val Phe Cys Glu Val Leu Thr Met Gln Gln Ser 260 265 270
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- Glu Ile His Glu Val Val Cys Ser Ser Glu Pro Glu Asn Val Gln Ala 305 310 315 320
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Leu Ala	Gly Asn 355	. Asp Gln	Ala Lys 360		Phe Leu	Thr As	p Gly Tyr
Gln Asp 370		Ala Ile	Leu Asn 375	Asn Leu	Leu Pro 380		t Ser Tyr
Val Leu 385	Gln Ile	Val Ala 390	Val Cys	Ser Asn	Gly Leu 395	Tyr Gl	y Lys Tyr 400
Ser Asp	Gln Leu	Ile Val 405	Asp Met	Pro Thr 410	_	Ala Gl	u Leu Asp 415
Leu Phe	Pro Glu 420		Gly Thr	Glu Glu 425	Ile Ile	Lys Gl 43	u Glu Glu O

Tyr Gly Lys Asp Asn Glu Glu Asp Thr Gly Leu Asn Pro Gly Arg Asp 435 440 445

Ser Val Thr Asn Gln Ile Arg Lys Lys Glu Pro Gln Val Ser Thr Thr 450 455 460

Thr His Tyr Asn His Met Gly Thr Lys Tyr Asn Glu Ala Lys Thr Asn 465 470 475 480

Arg Ser Pro Thr Arg Gly Ser Glu Phe Ser Gly Lys Ser Asp Val Pro 485 490 495

Asn Thr Ser Pro Asn Ser Thr Ser Gln His Val Ala Glu Phe Glu Thr 500 505 510

Glu Arg Gly Ile Ser Leu Pro Ser Gln Thr Gly Thr Asn Leu Pro Pro 515 520 525

His Asn Val Glu Gly Thr Ser Ala Ser Leu Asn Ser Gly Ser Lys Thr 530 540

Leu Phe Ile Phe Pro Gln Met Asn Leu Ser Gly Thr Ala Glu Ser Leu 545 550 555 560

Asn Thr Val Pro Ile Thr Glu Tyr Lys Glu Val Ser Ala Asp Val Ser

Glu Glu Asn Phe Leu Thr Asp Phe Lys Leu Asp Thr Gly Ala Asp Asp Ser Ser Gly Ser Ser Pro Ser Thr Ser Thr Val Pro Phe Ser Asp Asn Leu Ser His Gly Tyr Ile Thr Ser Ser Asp Met Pro Glu Ala Ile Thr Tyr Asp Val Leu Lys Pro Gly Ser Thr Arg Asn Ala Pro Glu Asp Ser Ala Pro Ser Gly Ser Glu Glu Ser Leu Lys Asp Pro Ser Leu Glu Gly Ser Val Trp Phe Pro Gly Ser Thr Asp Leu Thr Thr Gln Ser Glu Thr Gly Ser Gly Arg Glu Ser Phe Leu Gln Val Asn Ser Thr Asp Ile Gln Ile Asp Glu Ser Arg Glu Thr Thr Glu Ser Phe Ser Pro Asp Ala Thr Val Ser Gln Asp Pro Ser Val Thr Asp Met Gly Met Pro His Tyr Ser Thr Phe Ala Tyr Leu Pro Thr Glu Val Thr Pro Gln Ala Phe Thr Pro Ser Ser Arg Pro Leu Asp Leu Ala Pro Thr Ile Asn Ile Leu His Ser Gln Thr Thr Gln Pro Val Tyr Asn Gly Glu Thr Pro Leu Gln Pro Ser Tyr Ser Ser Glu Val Phe Pro Leu Ala Thr Pro Leu Leu Leu Asp Asn Gln Thr Leu Asn Thr Thr Pro Ala Ala Ser Ser Ser Asp Ser

Ala Leu His Ala Thr Pro Val Ser Pro Ser Val Gly Val Ser Phe Glu 805 810 815

Ser Ile Leu Ser Ser Tyr Asp Asp Ala Pro Leu Leu Pro Phe Ser Ser 820 825 830

Ala Ser Phe Ser Ser Glu Met Phe Arg His Leu His Thr Val Ser Gln 835 840 845

Thr Leu Pro Gln Val Thr Ser Ala Ala Glu Arg Asp Glu Leu Ser Leu 850 855 860

His Ala Ser Leu Leu Val Ala Arg Gly Asp Leu Leu Leu Glu Pro Ser 865 870 875 880

Leu Val Gln Tyr Ser Asp Val Ala Ser His Gln Ala Thr Thr Arg Ala 885 890 895

Ala Ser Asp Thr Leu Gly Phe Gly Ser Glu Ser Ala Val Phe Tyr Lys 900 905 910

Thr Ser Met Val Ser Gln Ile Glu Ser Pro Arg Ser Asp Val Val Met 915 920 925

His Ala Tyr Ser Ser Gly Pro Glu Pro Ser Tyr Thr Val Glu Gly Ser 930 935 940

His His Val Pro Thr Val Ser Tyr Ser Ser Ala Met Pro Leu His Gly 945 950 955 960

Ser Val Asp Val Ser Asp Gln Gly Ser Leu Leu Ile Asn Pro Ser His 965 970 975

Ile Ser Met Pro Glu Ser Ser Phe Ile Thr Pro Thr Ala Ser Leu Leu 980 985 990

Gln Pro Pro Pro Ala Leu Ser Gly Asp Gly Glu Trp Ser Gly Ala Ser 995 1000 1005

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- Leu Asn Ile Ser Ser Pro Val Ser Val Ala Glu Phe Thr Tyr Thr 1025 1030 1035
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- Lys Thr Ala Leu Pro Ser Val Pro Ser Asp Pro Ile Leu Ala Gly 1205 1210 1215
- Thr Pro Gln Val Glu Gln Ser Ser Ser Ser Val Ser His Pro Met 1220 1225 1230

- Ala Ser Glu Ser Gly Ser Ser Glu Ser Met Leu His Phe Thr Ser 1235 1240 1245
- Val Pro Ile Leu Asp Ile Ser Pro Ser Lys Val His Ser Thr Pro 1250 1255 1260
- Leu Gln Gly Leu Thr Val Pro His Ser Ser Lys Lys Phe Ser Glu 1265 1270 1275
- Gln Gly Leu Leu Lys Ser Lys Ser Pro Gln Gln Val Leu Pro Ser 1280 1285 1290
- Leu Phe Ser Asn Asp Glu Phe Phe Gln Asn Ala His Leu Asp Val 1295 1300 1305
- Ser Gln Ala Tyr Pro Pro Lys Gly Arg His Ala Phe Val Thr Pro 1310 1315 1320
- Val Leu Ser Ile Asp Glu Pro Gln Asn Thr Leu Ile Asn Lys Leu 1325 1330 1335
- Val Tyr Ser Glu Asp Ile Phe Ser Ser Thr Glu Ile Ser Ile Thr 1340 1345 1350
- Asp Lys Val Leu Thr Gly Leu Pro Thr Leu Ala Ser Asp Val Leu 1355 1360 1365
- Ser Ser Thr Asp His Ser Val Pro Leu Gly Ser Gly Pro Ile Ser 1370 1375 1380
- Leu Thr Met Val Ser Pro Asn Arg Asp Asp Ser Val Thr Thr Ala 1385 1390 1395
- Lys Leu Leu Pro Ser Thr Ala Thr Ser Lys Leu Thr Gln Ser 1400 1405 1410
- Ala Arg Ser Asp Ala Asp Leu Val Gly Gly Gly Glu Asp Gly Asp 1415 1420 1425
- Asp Tyr Asp Asp Asp Asp Tyr Asp Asp Ile Asp Arg Gly Arg Phe 1430 1435 1440
- Pro Val Asn Lys Cys Met Ser Cys Leu Pro Tyr Arg Glu Ser Arg

1445 1450 1455

Glu Lys Val Met Asn Asp Ser Asp Thr Gln Glu Ser Ser Leu Val 1460 1465 1470

Asp Gln Ser Asp Pro Ile Ser Pro Leu Leu Phe Glu Asn Thr Glu 1475 1480 1485

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